

CLAIMS

1. A method for controlling in closed loop an analog system (12) generating an output signal (S') from a control signal (N_C), wherein the control signal (N_C) is a series of digital values, each new digital value being determined from the difference
5 between a signal linked to the output signal (S') and the last determined value of the control signal (N_C) multiplied by a selected factor.

2. The control method of claim 1, wherein the analog system (12) generates an analog output signal (S') and is controlled by an analog control signal (V_C)
10 corresponding to the conversion of the digital control signal (N_C), said digital control signal (N_C) being provided by a digital system (42) which generates successive values of the digital control signal (N_C) based on a reference signal (P_{REF}) and on a digital detection signal (N''_D) corresponding to the conversion of an analog detection signal (V''_D), a new value of the digital control signal (N_C) being determined according to
15 the steps of:

- measuring an analog signal (V_D) representative of the analog output signal (S');
- determining the analog detection signal (V''_D) based on the difference between the representative analog signal (V_D) and the analog control signal (V_C) multiplied by the selected factor;
- 20 - converting the analog detection signal (V''_D) into a new digital detection signal value (N''_D); and
- calculating the new value of the digital control signal (N_C) based on said new value of the digital detection signal (N''_D) and on the last previously-determined value of the digital control signal (N_C).

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3. The method of claim 2, wherein the representative analog signal (V_D) and the analog control signal (V_C) have the same sign, the analog detection signal (V''_D) corresponding to the difference between the representative analog signal (V_D) and the analog control signal (V_C) multiplied by an amplification coefficient (K).

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4. The method of claim 1, wherein the analog output signal (S') is a variable voltage.

5. The method of claim 2, wherein the representative analog signal (V_D) is a positive voltage substantially equal to the maximum value of the analog output signal (S').

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6. The method of claim 2, wherein the reference signal (P_{REF}) is representative of the desired power of the analog output signal (S').

7. The method of claim 3, wherein the amplification coefficient (K) is constant.

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8. The method of claim 3, wherein the amplification coefficient (K) depends on the operating conditions of the digital system (12).

9. A device for controlling an analog system (12) a providing an analog output signal (S'), comprising:

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a digital system (42) providing a digital control signal (N_C);

a digital-to-analog converter (16) receiving the digital control signal (N_C) and providing an analog control signal (V_C) to the analog system (12);

a sensor (20) measuring an analog signal (V_D) representative of the analog output signal (S');

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a comparator (46) providing an analog detection signal (V''_D) based on the representative analog signal (V_D) and on the analog control signal (V_C); and

an analog-to-digital converter (47) converting the analog detection signal (V''_D) into a digital detection signal (N''_D) provided to the digital system (42), said digital system determining the digital control signal (N_C) based on a reference signal (P_{REF}) and on the digital detection signal (N''_D).

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10. The device of claim 9, wherein the analog system (12) is an amplifier of signals of a portable telephone.

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